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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/384,675	08/27/1999	GREGORY B. ARNOLD	M-617	8146

7590 05/29/2002  
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EXAMINER

FUREMAN, JARED

ART UNIT PAPER NUMBER

2876

DATE MAILED: 05/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MC

<b>Office Action Summary</b>	Application No. 09/384,675	Applicant(s) ARNOLD ET AL.	
	Examiner Jared J. Fureman	Art Unit 2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 December 2001.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-11, 14, 15 and 18-22 is/are rejected.
- 7) ☒ Claim(s) 12, 13, 16 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

1. Receipt is acknowledged of the amendment and appeal brief filed on 9/11/2001, and the amended appeal brief filed on 12/27/2001, which have been entered in the file. Claims 8-22 are pending.

2. In view of the amended appeal brief filed on 12/27/2001, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8, 10, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukumoto et al (US 5,047,615, previously cited) in view of Austin et al (US 6,068,420) and McKinnon et al (US 6,202,642).

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Fukumoto et al teaches a portable printer (3), comprising: an elongate housing having a front portion with a compartment (7) adapted to receive a data entry device (1), the housing further having a rear portion, the housing providing space at the rear portion for receiving a roll of a label web (as can be seen in figure 1, the printer housing includes tabs which receive and support a roll of label web (6)), at least one battery (49) within the housing, a print module (45) within the housing, the print module including a thermal print head (not shown) and a platen roll (not shown) cooperable with the print head for printing on the label web (see figures 1-5, column 1 lines 8-15, 23-36, 43-49, column 1 line 60 – column 2 line 3, and column 2 line 39 – column 4 line 23). Fukumoto et al also teaches the portable data entry device including an elongate data entry device housing having a front end, a scanner (2) disposed at the front end of the data entry device housing for scanning a label, the scanner being capable of receiving data through an open end of the compartment (the scanner extends through the open portion of the front end), the data entry device housing having a display and a plurality of manually operable keys (see figures 1 and 2).

Fukumoto et al fails to specifically teach an elongate printed circuit board disposed in the housing extending from the front portion to the rear portion of the printer housing and the print module being mounted to the circuit board at the rear portion of the housing.

Austin et al teaches a portable printer (10), comprising: an elongate housing having a front portion, a rear portion, the housing providing space for receiving a roll of a label web (30), an elongate printed circuit board (40) disposed in the housing

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extending from the front portion to the rear portion of the printer housing and a print module (38) being mounted to the circuit board at the rear portion of the housing (see figures 3, 4, column 3 lines 50-65, column 4 lines 12-21, column 7 lines 65-66).

In view of Austin et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the system as taught by Fukumoto et al, an elongate printed circuit board disposed in the housing extending from the front portion to the rear portion of the printer housing and the print module being mounted to the circuit board at the rear portion of the housing, in order to provide a secure electrical connection between the components of the system, and to avoid the need for a print head cable by mounting the print head directly on the circuit board (see column 7 lines 65-66).

Fukumoto et al as modified by Austin et al fails to specifically teach the battery being mounted on the printed circuit board at the front portion of the housing, a plurality of adjacent batteries, a separator between each pair of adjacent batteries, and the separators being secured to the printed circuit board.

McKinnon et al teaches an elongate printed circuit board (2700), a plurality of adjacent batteries (2704) mounted on the printed circuit board at the front portion of a housing (bottom 2708, top 2724), a separator (2712) between each pair of adjacent batteries, and the separators being secured to the printed circuit board (see figure 27 and column 13 lines 54-60).

In view of McKinnon et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the system as taught

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by Fukumoto et al as modified by Austin et al, the battery being mounted on the printed circuit board at the front portion of the housing, a plurality of adjacent batteries, a separator between each pair of adjacent batteries, and the separators being secured to the printed circuit board, in order to securely mount the batteries within the housing.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukumoto et al as modified by Austin et al and McKinnon et al, further in view of Schultz et al (US 5,679,943).

The teachings of Fukumoto et al as modified by Austin et al and McKinnon et al have been discussed above. Fukumoto et al also teaches the compartment having an open top, the compartment being transversely channel-shaped (see figure 2).

Fukumoto et al as modified by Austin et al and McKinnon et al fails to specifically teach the compartment having an open front end adapted to slidably receive a data entry device through the open end of the compartment, and an electrical connector at the rear end of the compartment for connection to a data entry device.

Schultz et al teaches a portable printer (110), comprising: an elongate housing having a compartment adapted to receive a data entry device (100), the compartment has an open top and an open front end adapted to slidably receive a data entry device through the open end of the compartment, the compartment being transversely channel-shaped, an electrical connector (not shown) at the rear end of the compartment for connection to a data entry device (the input/output jack 108 of the data entry device 100) (see figures 36, 40, column 8 lines 3-27, and 52-60).

In view of Schultz et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the system as taught by Fukumoto et al as modified by Austin et al and McKinnon et al, the compartment having an open front end adapted to slidably receive a data entry device through the open end of the compartment and an electrical connector at the rear end of the compartment for connection to a data entry device, in order to provide a compartment wherein the data entry device can be inserted and connected in a single motion (as compared to the system shown in figures 1 and 2 of Fukumoto et al, which requires tilting, sliding, and dropping the data entry device into the compartment), thereby providing a more ergonomic system.

6. Claims 11, 14, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukumoto et al as modified by Austin et al and McKinnon et al, and Schultz et al, further in view of Sherman et al (US 5,110,226, previously cited).

The teachings of Fukumoto et al as modified by Austin et al and McKinnon et al have been discussed above. Fukumoto et al also teaches the portable data entry device including an elongate data entry device housing having a front end, a scanner (2) disposed at the front end of the data entry device housing for scanning a label, the scanner being capable of receiving data through an open end of the compartment (the scanner extends through the open portion of the front end) (see figures 1 and 2).

Fukumoto et al as modified by Austin et al, McKinnon, and Schultz et al et al fails to teach the housing providing internal space at the rear portion for receiving a roll of a label web.

Sherman et al teaches a portable printer (24), comprising: an elongate housing (28), the housing having a rear portion, the housing providing an internal space (98) at the rear portion for receiving a roll of a label web (99) (see figures 1-3 and column 6 line 62 - column 7 line 31).

In view of Sherman et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the system as taught by Fukumoto et al as modified by Austin et al, McKinnon et al, and Schultz et al, the housing providing an internal space at the rear portion for receiving a roll of a label web, in order to provide protection for the label web (since this is the function of the cavity 98 and the printer cover 101).

7. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukumoto et al as modified by Austin et al, McKinnon et al, Schultz et al, Sherman et al, further in view of Goodwin et al (US 5,486,259, previously cited).

The teachings of Fukumoto et al as modified by Austin et al, McKinnon et al, Schultz et al, Sherman et al have been discussed above.

Fukumoto et al as modified by Austin et al, McKinnon et al, Schultz et al, Sherman et al fails to specifically teach the housing having a pair of opposed connected substantially mirror-image housing sections.

Goodwin et al teaches a portable printer (10) including a housing (11) having a pair of opposed connected substantially mirror-image housing sections (35 and 36) (see figures 1-3 and column 3 lines 11-3).



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In view of Goodwin et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the system as taught by Fukumoto et al as modified by Austin et al, McKinnon et al, Schultz et al, Sherman et al, the housing having a pair of opposed connected substantially mirror-image housing sections, in order to easily allow insertion of the internal components during manufacturing.

***Allowable Subject Matter***

8. Claims 12, 13, 16, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: While Sherman et al (US 5,110,226) teaches a portable printer (24), comprising: a housing (33), at least one battery (106) in the housing, an access opening in the housing to the inside of the housing, the battery being accessible through the access opening, and a door (110) for the opening movable between closed and open positions (see figures 1-3, and column 7 lines 9-31), the prior art of record, taken alone or in combination, fails to teach or fairly suggest: the access opening in the housing between the compartment and the inside of the housing, in combination with the other claimed limitations, as set forth in the claims.

The access opening as taught by Sherman et al is on the bottom of the housing, not located within a channel-shaped compartment that is adapted to receive a data entry device. Therefore, there is no motivation (other than applicants) for one of

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ordinary skill in the art at the time of the invention to combine the teachings of the prior art in a manner so as to create the claimed invention.

***Response to Arguments***

10. Applicant's arguments with respect to claims 8-22 have been considered but are moot in view of the new ground(s) of rejection.

As discussed above, Austin et al teaches a portable printer (10), comprising: an elongate housing having a front portion, a rear portion, the housing providing space for receiving a roll of a label web (30), an elongate printed circuit board (40) disposed in the housing extending from the front portion to the rear portion of the printer housing and a print module (38) being mounted to the circuit board at the rear portion of the housing.

McKinnon et al teaches an elongate printed circuit board (2700), a plurality of adjacent batteries (2704) mounted on the printed circuit board at the front portion of a housing (bottom 2708, top 2724), a separator (2712) between each pair of adjacent batteries, and the separators being secured to the printed circuit board.

Schultz et al teaches a portable printer (110), comprising: an elongate housing having a compartment adapted to receive a data entry device (100), the compartment has an open top and an open front end adapted to slidably receive a data entry device through the open end of the compartment, the compartment being transversely channel-shaped, an electrical connector (not shown) at the rear end of the compartment for connection to a data entry device (the input/output jack 108 of the data entry device 100).


**Conclusion**


11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wallner (US 5,969,319) teaches a print head mounted to a circuit board (see figure 3). Fujiwara (US 6,270,271 B1) teaches a portable printer and data entry device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jared J. Fureman whose telephone number is (703) 305-0424. The examiner can normally be reached on 7:00 am - 4:30 PM M-T, and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (703) 305-3503. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
jjf  
May 10, 2002

  
MICHAEL G. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800